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INPUT®

Candidate Applications

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Candidate Applications

YNBCO • 516 • 1997

Introduction

A
Objectives and Scope

The objective of this project is to enable Barclays Computer Operations (BCO) to develop its use of IT services so as to enable the Barclays Group to differentiate its offerings in the Financial Services Market. In support of that objective, BCO desires to obtain case studies of innovative applications of IT in the Financial Services industry (or other industries if appropriate) in North America.

The innovative applications should involve uses of IT that provide add-on capabilities to financial services provided or that could be provided by BCO.

The number of case studies covered by this project amount to five.

Each case study is to include information on the following:

- The name, location and industry of the company involved.
- A description of the application including the technologies used and the resulting benefits.
- The metrics used to measure value such as time to deal with inquiries, cost reduction, market share, profitability or market value.

In the course of the study, BCO supplied further information on the types of applications that were of interest and additional case studies were examined to meet BCO needs.

B
Methodology

INPUT used its existing U.S. research materials and unpublished market intelligence as well as primary research to locate innovative applications that would meet the interests of BCO.

- When applications were identified, that appeared to INPUT to meet the needs of BCO, they were presented in a draft report to BCO.
- As a result of the review of these applications by BCO, additional submissions of applications were submitted to more closely meet the needs of BCO.

The information assembled and submitted to meet the requirements of BCO is gathered in written and electronic form in this report.

C
Deliverables

The case studies submitted in the course of this project to meet the needs of BCO are presented in Section III of this report.

Additional information has been obtained in relation to the case study for Chase Bank, and some of this was submitted to BCO independent of this report.

D
Related Reports

Studies conducted by INPUT in 1996 and 1997 which include information on vendor offerings in the banking and finance market include:

- *Global Retail Electronic Banking*
- *Financial Transactions on the Internet*
- *Global Corporate Electronic Banking*
- *The Impact of Digital Money on Banking*

II

Executive Summary

A
Case Studies

In the course of this study, case studies were submitted for activities at seven banks or other financial organizations. Some of these were much more responsive to the needs of BCO than others. The submissions addressed the following institutions and applications:

Chase Bank	Provide a CD ROM with images of checks that can be used for research
First Tennessee	Utilize Check Processing Software More Suited to the Hospitality Industry
First Union and Banc One	Cash Management Services to Small Business
KeyCorp	Call Center Automation
Citicorp	Database Marketing to Support Retail Sales
Wells Fargo Bank	Use of Client/server Technology to Increase Trader Productivity
Insurance Service Org.	Provide a Total Record for Property and Casualty Insurance Including Photo Images

B
Findings/Observations

Some of the innovative applications uncovered through research in the U.S. were of interest to BCO. For instance, the applications involving Chase, First Tennessee, First Union and Banc One appeared to offer opportunities.

It was necessary to review some of the applications from the perspective of their suitability to the U.K. or European market. Further research of this nature should include research steps that address markets where applications would be implemented.

Additional research appeared desirable in relation to several of the opportunities such as the Chase Bank application. Additional information that came to the attention of INPUT in regard to this application was supplied to BCO.

Innovative applications developed by vendors and offered to banks might also be of interest to BCO. For instance, the bill paying application developed by Checkfree that allows merchants to send billing information to an Internet Web site operated by a bank might be developed by a bank a bank according to several bank development personnel interviewed by INPUT.

C
Recommendations

Research that examines market needs, product trends and competitive offerings could provide information on product opportunities as well as related information that made it possible to assess opportunities as well as competitive factors in regard to specific markets in the U.K. or Europe. Such research could be undertaken on a custom basis or as part of a joint undertaking with other vendors and financial institutions.

Profiles

The following profiles were prepared by INPUT for BCO.

A
First Union and Bank One

1. Company Information

First Union Bank

Charlotte, North Carolina

Small Business Segment within Cash Management

First Union is the 6th largest bank in the U.S. with assets of $133 billion as of 12/31/95.

2. Description of Application and Technology

Basic Idea: Cash management for small business using a PC platform at customer offices.

Cash management services to small business (less than $10 million of annual sales) is rising in interest as a means of gaining fees, linking a customer tighter to a bank and selling additional services.

First Union started to offer daily balance information to small businesses by Fax, about 1991 and found tremendous demand for the product. They are now moving cash management services for small business to a PC platform at the customer's office. About one-third of the customers for the daily balance information are now obtaining that information and other information and services on the PC platform. The services being offered include small business payroll with direct deposit and ACH transactions. First Union contacts noted that there was mounting demand for wire transfer, cash concentration and zero balance accounts from clients. They said small business is just starting to demand the type of services that large corporations have been receiving.

First Union reports that platforms at clients which they are designing work for include workstations that use DOS or Windows. They also noted that little new software or changes were needed with systems at the bank which process accounts of small businesses. Investment will be made in software for client's workstations in the future.

Banc One has implemented more services on its PC product for small business than First Union has, including balance and transaction information, wire transfers, ACH transactions and bill payment capabilities. Banc One contacts point out that corporate cash management is a good area for banks to exploit because IT processors have not managed to capture much business from banks

in this area. Some banks have chosen to use IT vendors such as NDC to collect or distribute cash management, however. Banc One also feels that the large banks that develop a product concept for the PC being used by a small business will have more chance of gaining new accounts as well as an opportunity to supply a product capability to smaller banks.

The opportunity for BCO would be to supply a total approach to banks (or insurance companies) consisting of a PC product that was upgraded to support new services as well as aid with standardized approaches for supplying cash management services to small business.

3. Metrics Used to Measure Value

First Union claims that this is one of their areas of highest growth and has high margins as well. They claim that few banks have good cash management products for small corporations: so they feel that this is a product that could bring in new business accounts as well as generate fees.

A recent American Banker survey pointed out that less than 10% of companies that fell in the small business market (below $10 million sales annually) use cash management services such as account reconciliation, lockbox, zero balance or check imaging targeted specifically for small business. However, about 70% of small business are served by banks with modified versions of the cash management systems developed for large corporations. Contacts feel that at least one-third of small businesses that they serve in this manner are candidates for small business cash management systems, at this time.

It is just coming to the attention of banks that they can implement better cash management facilities for small corporations and deliver information to (and receive instructions from) a PC at the office of the small business according to a spokesman at Banc One. The Banc One contact agreed with the assessment of the American Banker, that this is a rich new market for banks.

B
KeyCorp

1. Company Information

KeyCorp

Cleveland, Ohio

Electronic Commerce Unit

KeyCorp is the 12th largest bank in the U.S. with assets of $62 billion as of 12/31/95.

2. Description of Application and Technology

Basic Idea: Plan the use of call centers to handle a high percentage of calls automatically as well as to market additional services.

The KeyCorp Call Center applications include an inquiry service that can pull together information from a retail customer's full banking relationship, a telephone banking capability and a modeling capability to evaluate customer profitability. The inquiry service, which uses an automated voice-response system connected to open workstations, handles most of the inbound traffic of over 3 million calls per month (growth is about 25% per year). Approximately 79% of inquiries are handled automatically.

The modeling capability enables decisions to be made on what types of inquiries to answer automatically as well as what inquiries might eventually entail a change. None are charged for at present although excessive calling from low profitability accounts has been identified. There will probably be some means of charging for inquiries that is based on numbers of inquiries and balances in accounts in the future.

The use of the automated voice-response system, which KeyCorp feels is state of the art technology, and the modeling capability which is used to analyze calls might be packaged together with retail banking by telephone as done by KeyCorp or sold as a service that interfaced to banks who were expanding their telephone services.

3. Metrics Used to Measure Value

As noted, KeyCorp answers 79% of inquiries with its automated voice-response system. Telephone banking and cross-sales of additional products are also accomplished with the call center facility.

Contacts at KeyCorp, U.S. Bancorp, Citicorp and Chase feel that this type of facility can save money (20 to 40%) over systems using human operators exclusively such as those utilized in "First Direct" types of service.

KeyCorp has not found it necessary to charge for excessive calling by low profitability clients since the overall operation is profitable. The bank claims that the four centers that support the Call Center operations do the work of 130 branches at a cost level that is about 25% less.

C
Citicorp

1. Company Information

Citicorp

New York, NY

Application is based in San Antonio

Citicorp is the second largest bank in the U.S. with assets of $227 billion as of 12/31/95.

2. Description of Application and Technology

Basic Idea: Use the database and data warehouse knowledge of Citicorp to increase retail sales.

The initial objective of Citicorp is to use database marketing and call center based sales to increase retail banking sales and productivity. Citicorp plans to implement data warehouse technology and outbound as well as inbound calls in the future to increase the sales capability of this operation. Current plans call for this to be done in 1997 assuming a pilot operation in early 1997 will justify benefits that have been anticipated.

The currently used data access techniques enable trained customer representatives to target opportunities in inbound calls for selling additional services. Assistance is given on inquiries as well. Profiles of the situations where additional services such as personal loans could be sold are introduced during training. There is a 7 week training course followed by on the job training. Supervisors listen in on calls to ensure that representatives are using correct sales and service techniques and performance in terms of sales volume is measured and analyzed. Contacts feel that the Citicorp capabilities could be used to sell other services or products as well as retail banking.

The system used to access data at present will be converted to a data warehouse capability being installed by the central IS staff of Citicorp. The platforms in use consist of PC units networked to a LAN based RS/6000, which is using AIX now, but will move to SNX.

Citicorp plans to stay ahead of competition by moving to the use of a data warehouse as well as using outbound telephony as well as inbound systems. Outbound calling will involve follow up with trained contact personnel to help specify details of service and close business.

3. Metric Used to Measure Value

The current application, which uses database marketing techniques and a well planned and tested sales training program for customer representative, was tested and justified before Citicorp made an investment in the San Antonio facility. In addition to equipment, software and communication capabilities, the facility consists of two buildings with 220 square feet and staff of 1300, of which, 65% are customer services representatives.

A contact stated that the level of investment made by Citicorp illustrates that the application was tested successfully. The president of this facility stated that current sales volume meets targets. Although the primary benefit is revenue enhancement, Citicorp that customer service is being supplied at a lower cost than previously possible.

D
Wells Fargo Bank

1. Company Information

Wells Fargo Bank

San Francisco, California

Trading Systems Unit

Wells Fargo is the ninth largest U.S. bank with assets of $105 billion as of 12/31/95.

2. Description and Application

Basic Idea: Utilize client/server technology to improve productivity and flexibility of service in trading for trust accounts.

Wells Fargo has analyzed trading for trust accounts since it had to merge these activities for recent acquisitions with its internal business. Wells Fargo realized that the use of Windows capabilities could enable traders to be more efficient and that the use of networked workstations could make it easier to add of subtract traders in any group as well as set up traders at new locations

The application systems being installed by Wells Fargo handle equity and fixed income trading for trust accounts. The software applications are designed to increase the productivity of traders as well as provide better service to clients. The use of screens and icons to enter trades speeds up trades and sides traders to take account of special needs or request of clients. Wells Fargo found there were at least six systems that could address their needs for trading software which used Windows screens. The software chosen for the job was the Landmark product of Longview Group Inc. of Boston, MA. Trust department personnel at Wells Fargo and elsewhere feel that the challenge in this application area is to keep upgrading or changing software so that improvements in technology can be rapidly implemented.

The software platform that was selected for the server was Windows NT. Reports from several planning firms had convinced Wells Fargo that Windows NT had more chance of being a dominant technology in years than UNIX.

The computers selected for traders and portfolio managers will use Windows 3.1 or 95. Networked client/server workstations were of interest as an equipment platform since they would make it possible to add extra volume or provide service at a new location with smaller investment. The equipment manufacturer selected for the server was NEC.

3. Metrics Used to Measure Value

The system that was installed in the first half of 1996 will handle the work volume of Wells Fargo and First Interest Bank, which Wells Fargo acquired. The work has not been fully converted to the new system, but analysis of work moved to the system shows that it will triple work volume while adding only 20% more staff. Savings of 75% in personnel were achieved in equity trading and about 30% in fixed income trading. Savings are attributable chiefly to the use of client/server technology.

A contact at Wells Fargo admits that it will be a challenge to stay up-to-date in the use of client/server technology in view of the total challenge in the use of IT being faced by the bank due to its acquisition activity, but thinks that most large U.S. banks are in the same position. He points out that the bank of Boston has moved to a client/server approach that does not step as far ahead as Wells Fargo has done in its selection of Windows NT. This contact feels that there is a need in this application area to regularly test new client/server technology including GUI in relation to improvements in software products for trading so that banks, insurance and other financial companies could be prepared to move quickly if better alternatives became available.

E

ISO

1. Company Information

Insurance Service Organization

Pearl River York, NY

Commercial Risk Services Subsidiary

Performs service functions such as preparing data bases to support research on rates and collects information for insurance companies.

2. Description of Application and Technology

Basic Idea: Provide a total digital record of supporting data for property and casualty insurers. The concept might also be used for supporting data for certain types of credit business.

ISO has introduced personal computers and software, integrated with the use of a digital still camera to support agents in the field. Information is obtained more rapidly and accurately to provide underwriting support for property and casualty insurance companies. The information can be supplied back to the ISO main office within hours. ISO also believes that this equipment could be used for reports of damage or research to support financing plans to support financing plans for many building projects.

The computer (486) and camera (Kodak Digital Science, DC 40) combination and the software utilized with the camera is the result of six years of research. It went into operation in January, 1996.

3. Metrics Used to Measure Value

Since inception in January, 1996, this equipment has been responsible for savings of four to six days in completing work to support sales of property and casualty sales. The quality of work and customer services support has also improved as a result of the use of high quality picture images that can be integrated with text. Benefits are hard to quantify since ISO has followed the practice of charging out all costs. However, contacts believe that savings in the work area involved have been over 20%. In addition, the speed up of work has enabled contracts to be closed more rapidly and saved sales expenses for clients.

F
First Tennessee Bank

1. Company Information

First Tennessee Bank

165 Madison Ave.

Memphis, Tennessee, 38103-2723

Regional bank with $13 billion in assets of 12/31/95.

2. Description of Application and Technology

Basic Idea: Develop and use credit card processing software more suited to the hospitality industry than retail business together with authorization and automatic dialing equipment at hotels. This enables First Tennessee to gain and hold card processing and merchant acquiring business for hotels and the hospitality industry. In effect, the bank is providing as well as banking services to hotel clients.

First Tennessee has become the largest processor of card transactions among banks in the hospitality industry. Its customers include Marriott International, ITT Sheraton, Westin Hotels, Holiday Inn, Doubletree, Carnival Hotels and Casinos and Destination Hotels. The only larger processor of credit card business for hotels is First Data.

First Tennessee has developed software that handles authorization for quick check ins of guests and reduces the lag between authorization and settlement. The latter is accomplished by setting up a relationship between reservations and credit card account numbers. That relationship is used with software and equipment that automatically dials the credit card organization and provides it with the data necessary to connect the authorization to the settlement. As a result, First Tennessee can charge lower discount rates to hotel clients. In addition, the hotels can have their processing of credit card bills reduced by four to five times.

The proprietary software developed to enable the bank to handle hotels and other organizations in the hospitality industry was developed by a group of 40 people that joined the merchant services operation of First Tennessee in 1992. They had previously worked for the Electro Data Corp.

3. Metrics Used to Measure Value

First Tennessee states that the software that they have developed and use with hotels to be responsible for processing about $11 billion of credit and debit card bills in the U.S., Canada and Puerto Rico in 1996. It is 14th largest merchant acquirer as a result. Fees from this service have provided a steadily growing return for First Tennessee.

The plans for this service include expansion to other countries as well as competition for additional market share. Based on demand from hotels in other countries, plans have been developed to extend this service to Europe and other overseas locations in the next few years. In the present market place in North America, lodging sales are expected to grow by about 20% in the next year, according to card organizations. First Tennessee hopes to grow by more than this amount through aggressive contact work and promotion of its services and banking record.

G
Chase Bank

1. Company Information

Chase Bank

1 Chase Plaza

New York, NY, 10081

Major Money Center Bank with about $300 billion in assets as of 12/31/96.

2. Description of Application and Technology

Basic Idea:Providing a CD ROM with images of both sides of a check together with a complete check record so that a company or other organization can use a inexpensive CD ROM reader to search for images of checks by amount or check number. The images can be read and pasted into letters or enlarged so that signatures or minutiae on the check can be examined.

This service, which is called CD Search, originated at the Texas Commerce subsidiary. The service originated as a result of demand from a customer for check images on CD ROM. The commercial potential of the product was evident when 7% of the commercial accounts of Texas Commerce signed up for the service within 4 months of inauguration of the services without a marketing effort.

The service can provide up to 25,000 checks on one CD ROM, but research with compression technology suggests that up to ten times that amount of checks can be stored.

Chase bank operations personnel noted that they thought the product would appeal only to clients who had more than 1,000 or 2,000 checks per month, but the product has been bought by smaller accounts. It is expected that a high percentage of all commercial accounts will eventually use this service. Selling and installing the service and discussion of its application to customer needs is easy to accomplish, but requires banking and IT experience.

The service was launched by using an external service to scan items and prepare the CD ROM. The service was brought in-house in the third quarter of 1996. The service requires IT aid to customers in recommending or specifying the CD ROM reader and its use in searching for, reading and manipulating images.

The product/service was originally priced at .$0.025 per item which is more expensive than microfilm which is usually priced at $0.015 per item. However, microfilm is much more labor intensive to search and individual items can not be instantly found. The product is much less expensive than using sorted paper checks for retrieval of information.

3. Metrics Used to Measure Value

Chase corporate banking relation personnel report that this product has definite value with clients as a service capability.

Present revenue of the product is reported to be over $10 million per year, but its potential is thought to be more than 20 times that amount.

4. Use of Technology

Original scanning was accomplished at the service bureau, Scan-Direct. Most scanning is now accomplished on IBM 3890 check sorters at a Chase location. The images are stored on CD ROMs. Some checks are still scanned at the service bureau, Scan Direct, on ScanOptics 7800 or BancTec units.

The objective of using an inexpensive CD ROM reader was accomplished by having customers acquire readers for PC s at their sites. The PC must be IBM compatible with a 486DX chip or later, at least 8 megabytes of RAM and a hard drive that has at least 5 megabytes of storage.

Scan-Data supplies service bureau operations for banks and supplies PC software for their customers check research operation. They have recently developed contracts with a group of large banks

5. Viability of Application in the U.K. market.

According to contacts at Chase, this application is being enthusiastically received at corporations of all but the smallest size. They anticipate that it would be well received in the U.K. as well. The application makes it much more possible to review checks, and there is more demand for this than was anticipated. The service bureau, ScanDirect, has been getting increasing contact from banks that want to offer this service. ScanDirect has sold services to assist banks including a copy of the software used to search the CD ROM.

The INPUT U.K. office also feels that this service would be attractive in the U.K., based on contacts with business during research on business needs for information.